State Of California The Resources Agency of California

Memorandum

Date: November 26, 2001
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To: Robert A. Laurie, Presiding Member
William J. Keese, Associate Member

From: California Energy Commission – Lance Shaw, Siting Project Manager
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Subject: **ROSEVILLE ENERGY FACILITY (01-AFC-14) – ISSUES IDENTIFICATION REPORT**

Attached is the staff's Issues Identification Report. This report serves as a preliminary scoping document as it identifies the issues the Energy Commission staff believes will require careful attention and consideration. However, this report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. Energy Commission staff will be prepared to present the Issues Report at the Informational Hearing on November 27, 2001.

The Energy Commission is reviewing the Roseville Energy Facility pursuant to the 12-month Application for Certification (AFC) process set forth by Public Resources Code section 25550. Therefore a portion of this report addresses scheduling.

Attachment
cc: Proof of Service List

LS:km

ISSUES IDENTIFICATION REPORT

ROSEVILLE ENERGY FACILITY

(01-AFC-14)

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PURPOSE OF THE REPORT

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties, and the public of the potential issues that have been identified in the case thus far. Issues are identified as a result of discussions with federal, state, and local agencies, and our review of the Roseville Energy Facility (REF) Application for Certification (AFC), Docket Number 01-AFC-14. This Issues Identification Report contains a project description, summary of potentially significant environmental issues, and a discussion of the proposed project schedule. The staff will address the status of potential issues and progress towards their resolution in periodic status reports to the Committee.

PROJECT DESCRIPTION

On August 10, 2001, Roseville Energy Facility, LLC (the applicant), a wholly owned subsidiary of Enron North America Corporation, filed an AFC for a nominal 900 MW power plant called the Roseville Energy Facility. The proposal is for a natural-gas-fired combined-cycle generating facility with a 230-kilovolt (kV) switchyard and approximately 10.1 miles of new 230-kW transmission lines. The applicant's proposed site is a 22-acre parcel of land located within the south-central portion of an overall 73-acre parcel (purchased by the City north of Phillip Road). It is approximately 5 miles northwest of downtown Roseville in Placer County, California.

The applicant is seeking approval under a 12-month review process to construct and operate a natural-gas-fired combined-cycle generating facility. Electricity will be delivered to the existing electrical grid via a 10.1-mile long 230 kilovolt (kV) single circuit interconnection to the Western Area Power Administration's (Western) Roseville Substation which is located east of the REF site. The interconnection will involve several miles of new transmission line construction and utilization of approximately 7 miles of existing Western transmission corridor which will require replacement of an existing 230 kV line on the interior of the corridor. Several transmission alternatives have been identified to connect the plant switchyard to the Western corridor to allow flexibility associated with landowner preferences.

The site is less than 0.1 mile north of the City of Roseville's Pleasant Grove Wastewater Treatment Plant (PGWWTP). This treatment plant is scheduled to be operational in late 2002 or early 2003. It will be the source of the project's 3,300 gallons per minute (gpm) plant water supply. A 2.9-mile long potable water supply line will be constructed to connect to the City of Roseville water main to the southeast of the REF to provide up to 28,800 gallons of fresh water per day.

The proposed REF will generate process wastewater, that will be discharged via a zero discharge (ZD) system that will generate 9,040 tons per year of a non-hazardous salt cake. Water recovered by the ZD system will be used for makeup to the heat recovery steam generators (HRSGs), after additional treatment, and mixed with reclaimed water

for makeup to the combustion turbine generator inlet evaporative coolers. Sanitary waste will be disposed of at the adjacent PGWWTP. Onsite stormwater will be discharged to the tributary of Pleasant Grove Creek northeast of the REF plant site.

The proposed REF includes three combustion turbine generators operating in combined cycle mode with supplemental firing, using a two-on-one configuration plus a one-on-one configuration or a three one-on-one configuration. The HRSG stacks will be 150 feet tall or less in conformance with good engineering practices. The estimated cost to construct the facility is between $350 and $450 million.

The control of oxides of nitrogen (NOx) emissions within the gas turbines will be achieved using dry low nitrogen (DLN) combustors in combination with post-combustion selective catalytic reduction (SCR) for NOx control and an oxidation catalyst for carbon monoxide (CO) control. These emission control strategies constitute Best Available Control Technology (BACT)/Lowest Achievable Emission Rate (LAER). The F-class gas turbine exhaust will meet stack emission permit requirements for NOx and CO. An emission limit of 2.0 ppmvd at 15 percent oxygen (O2) on a three-hour rolling average, is proposed.

The applicant plans to begin construction in fourth quarter 2002 and complete construction in the fourth quarter 2004. The facility would provide for a peak of approximately 315 construction workers at the project site.

POTENTIAL MAJOR ISSUES

This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. This report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report was based on staff's judgement of whether any of the following circumstances will occur:

- Significant impacts may result from the project which may be difficult to mitigate;
- The project as proposed may not comply with applicable laws, ordinances, regulations, or standards (LORS);
- Conflicts may arise between the parties about the appropriate findings or conditions of certification for the Commission decision that could result in a delay to the schedule.
- Areas where resolution may be difficult or may affect the schedule.

The following table lists all the subject areas evaluated and notes those areas where the critical or significant issues have been identified and if data requests have been requested. Even though an area is identified as having no potential major issues in this report, it does not mean that an issue will not arise related to the subject area.

Major Issue	Data Request	Subject Area
Yes	Yes	Project Overview
Yes	Yes	Air Quality
No	Yes	Alternatives
Yes	Yes	Biological Resources
No	Yes	Cultural Resources
No	No	Facility Design
No	Yes	Geological Resources
No	Yes	Hazardous Materials Management
Yes	No	Land Use
No	Yes	Noise
No	Yes	Paleontological Resources
No	Yes	Plant Efficiency
No	No	Public Health
No	No	Reliability
No	No	Socioeconomics
Yes	Yes	Soil & Water Resources (Data Requests will be filed at a later date.)
No	Yes	Traffic & Transportation
No	No	Transmission Line Safety & Nuisance
Yes	Yes	Transmission System Engineering
No	Yes	Visual Resources
No	No	Waste Management
No	No	Worker Safety and Fire Protection

TECHNICAL ISSUES

Staff has begun its analyses of the project and linear facilities and is currently in the discovery phase of the AFC process. Potential issues have been identified in the areas of Project Overview, Air Quality, Biological Resources, Land Use, Soil & Water Resources, and Transmission System Engineering.

PROJECT OVERVIEW

From the information presented in the AFC, staff was unable to determine the location of the natural gas pipeline. There appears to be inconsistencies within the AFC that leave the route of the gas line in doubt for our review. The AFC analyzed a 5 mile natural gas line. Other parts of the AFC indicated that the gas pipeline is 4 to 6 miles with about 25 miles of reinforcement to the local gas transmission system. In order to fully evaluate this project, the applicant will need to clarify the location and length of the pipeline and provide a complete analysis of potential impacts if the route has not been analyzed in the AFC.

AIR QUALITY

The applicant proposes to mitigate increased emissions of air contaminants and comply with laws, ordinances, regulations, and standards (LORS) by securing emission reduction credits (ERC) from existing sources within Placer County and elsewhere in the greater Sacramento Valley Air Basin. Agricultural emissions reductions are included in the applicant's offset package.

Because these credits are proposed to be used to comply with federal new source review requirements, the U. S. Environmental Protection Agency and Placer County Air Pollution Control District must agree on the quantification, permanence, and enforceability of the credits. Credits from sources outside Placer County may need to be authorized for transfer by neighboring air pollution control districts. Without acquisition of sufficient offsets and successful third party review of the offsets' strategy, project emission increases would be difficult to mitigate.

AIR PERMITS

This project requires permit application review and approval (Determination of Compliance (DOC) and Prevention of Significant Deterioration (PSD)) from both the Placer County Air Pollution Control District and the USEPA. The District has not been delegated PSD permit review; therefore, Region IX of USEPA will review the applicant's PSD permit. While these two primary review agencies have indicated that they will work to expedite their respective analyses, the overall multi-agency review necessary including U.S. Fish and Wildlife Section 7 consultation and Federal Land Manager air quality related values modeling review to complete the air quality permitting could result in a longer permitting schedule. The final PSD permit may not be issued within the timeframe that the Energy Commission requires for project certification.

CONSTRUCTION IMPACTS

The initial construction impact analysis provided in the AFC indicates that there are potentially significant impacts as a result of the construction of this project. The impact analysis predicts that the construction of the project will potentially cause or worsen exceedances of the 24-hour PM_{10} California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) and significantly worsen exceedances of the annual PM_{10} CAAQS. Staff also has concerns that the fugitive particulate emissions have not been adequately estimated considering the amount of earth moving required for this project, and that some of the modeling assumptions may under predict the impacts of the other pollutants. Staff has requested that the applicant revise its emission estimates to correct both errors and omissions. Staff will then conduct a revised modeling analysis to determine reasonable worst-case pollutant impacts from construction. Staff will include the results of the revised construction impact analysis, along with a discussion of potential construction mitigation measures, if needed, in its Staff Assessment.

BIOLOGICAL RESOURCES

Staff believes there may be impacts to the Woodcreek Oaks Mitigation Area. Construction of the proposed REF transmission lines will require replacement of transmission line towers within a section of the Western Area Power Administration (Western) Corridor. Tower replacement, as proposed by the applicant (AFC, Section 5.6.2.2, pp 5.6-42-5.6-44) may cause indirect impacts to vernal pools/swales within the existing Woodcreek Oaks vernal pool mitigation site. The Woodcreek Oaks vernal pool site was constructed as mitigation for an unrelated project. Additional impacts to this area would be difficult to mitigate.

U. S. Fish and Wildlife Service and staff are concerned about any impacts to this area, and have requested that the applicant provide alternatives to construction and/or routing of the transmission line to avoid impacts to the vernal pool mitigation area.

The applicant has indicated that modification of the Western Substation will be needed for termination of the proposed REF transmission line (Section 3.6.2.3, page 3.6-1). Western is currently conducting system impact assessments and a facilities siting study to determine the feasibility of the interconnection. If expansion or upgrades to interconnections becomes necessary, impacts to biological resources around the substation, or transmission lines would need to be quantified.

The applicant needs to refile its revised biological assessment. U.S. Fish and Wildlife Service (USFWS) normally requires 135 days to review the adequate biological assessment before it issues its biological opinion. (A draft biological may be made available 90 days after USFWS receives an adequate biological assessment.) This may delay staff's analysis of the project.

LAND USE

Members of the public and the Roseville Joint Union School District have indicated that possibly two or three schools (elementary, middle, senior high) are proposed in the West Roseville Specific Plan (i.e., West Park, Signature Park Development). Concerns from the public include hazardous material deliveries, natural gas ruptures, and air quality/public health items.

In a November 20, 2001 telephone discussion with the City of Roseville Planning Staff, Mark Morse and Nela Luken, Commission staff reviewed possible development proposals, including school facilities, anticipated in the area of the proposed power plant. Mr. Morse and Ms. Luken indicated that the existing infrastructure (i.e., roadway system, sewer system capacity, drainage etc.), have not been designed to handle capacity outside the city limits, and until further studies are prepared addressing these issues, development will not occur in the western portion of Placer County.

The City Council has requested that potential developers prepare a Feasibility Study for the area in and around the power plant site. The Planning Staff anticipates that the results of the study will be presented to the City Council in March 2002. If the City Council approves the study in March, developers may be allowed to proceed through

the Environmental Impact process, which could take years before final approvals could be initiated for development of the project(s). The layout of the subdivisions, including location of school sites could change significantly from the draft plans, which are currently being circulated to the public.

The public has also expressed concerns about the project's proximity to a parochial school currently under construction at Pleasant Grove Road and Fiddyment Road. The project site is approximately 1. 2 miles southeast from this school site. Public concerns are similar to those noted above (i.e., hazardous material deliveries, natural gas ruptures, air quality/public health). Commission staff specialists for these areas will be addressing potential impacts in the publicly noticed staff issue workshops, and the Preliminary Staff Assessment.

WATER RESOURCES

Staff is concerned whether the cooling water quantity and supply estimates and the size of the proposed cooling towers are accurate and adequate.

The heat and water balances were not performed at wet bulb temperatures normally used to size the steam turbine generators and cooling processes. This may result in inappropriately sized cooling towers. This creates questions regarding the quantity of cooling water needed.

The water make-up rate substantially increases with supplemental firing of the HRSG boiler. The current AFC “maximum day” REF make-up rate exceeds the average dry weather Pleasant Grove Wastewater Treatment Plant (PGWWTP) supply by 3.4 million gallons per day (MGD). The wastewater storage tank will provide only about one day of supplemental make-up water, meaning that if this “maximum day” scenario continues for more than a day, or if an emergency shut-down of the PGWWTP occurs for some reason, then REF supplemental firing or output will have to be curtailed. The reverse osmosis (RO) recovery rate estimates are higher than normal practical estimates and may over estimate the quantity of water available after cleaning from the PGWWTP. These considerations raise the concern of whether there is enough water available and where alternative water will come from.

TRANSMISSION SYSTEM ENGINEERING

The Northern California area now and through the next five years, has inadequate transmission import and export capability to adequately support the proposed electrical system load[1]. The insertion of the following four projects: Roseville Energy Facility (900 MW), Rio Linda/Elverta Power Project (560 MW), Colusa Power Plant (500 MW), and Cosumnes River Project (1000 MW), totaling 2960 megawatts (MW) will create many system reliability impacts. Each project, depending on its position in the generation queue will affect the other projects and the full build out of the projects will cause significant “cumulative” reliability impacts. The specific impacts of each project and the

[1] At present there is an operative load-dropping scheme, which would be triggered for line outages for 300 MW of customers in the Greater Sacramento Area, about 250 thousand customers.

"downstream" modifications will be extremely difficult to identify and could become problematic. The normal siting process is not designed to accommodate the build out of significant generation in the face of a developing and highly uncertain transmission infrastructure. Staff is unclear at this time how it will be possible to demonstrably identify the specific impacts of the Roseville project (or that of others). Major concerns resulting from such large generation development during transmission infrastructure changes and those implications for the Roseville project are as follows:

Cumulative environmental and other impacts are increased when projects and their "downstream" facilities are developed piecemeal. System reliability can also be negatively affected by such development.

Staff will ensure that the analysis for each project is carefully coordinated. The staff will facilitate communications between each project and its participants and will pull together the applicable stakeholders to secure and communicate their views. Workshops will be scheduled to communicate the implications of the known cumulative impacts of each project.

SCHEDULING ISSUES

Following is staff's proposed schedule for key events of the project. The ability of staff to be expeditious in meeting this schedule will depend on the applicant's timely response to: staff's data requests, obtaining land use approvals, obtaining emission reduction credits, and other factors not yet discovered.

ENERGY COMMISSION STAFF'S PROPOSED SCHEDULE

	Activity	Day	Calendar Day
1	Applicant filed Application for Certification (AFC)	-68	August 10, 2001
2	Decision on data adequacy at business meeting	0	October 17, 2001
3	Staff filed data requests	35	November 20,2001 (except Soil and Water Resources)
4	Staff files Issue Identification Report	39	November 26, 2001
5	Information hearing, site visit	40	November 27, 2001
6	Data response and issue resolution workshop	77	January 2, 2002
7	Preliminary Determination of Compliance from Placer County Air Pollution Control District	133	February 27, 2002
8	Local, state, and federal agency draft determinations (e.g., draft bio opinion)	141	March 7, 2002
9	Revised Biological Assessment from the Applicant	*	Not known
10	Preliminary Staff Assessment/ Preliminary Draft EIS (Western) filed	153	March 19, 2002
11	First PSA/ Preliminary Draft EIS Workshop	160	March 26, 2002
12	Local, state, and federal agency final determinations (e.g., FDOC, bio opinion)	181	April 16, 2002
13	Final Staff Assessment/ Draft EIS Western	212	May 17, 2002
14	Prehearing Conference	180	April 15, 2002
15	Start Evidentiary Hearings	226	May 31, 2002

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* Biological Assessment's filing is needed to begin consultation process. Fish & Wildlife Services normally requires 135 days to issue its Biological Opinion.